

REMARKS

Independent claim 1 and dependent claims 8, 11 and 14 would be the only claims remaining after entry of this amendment. All other claims have been canceled, without prejudice or disclaimer.

Amended claim 1 incorporates subject matter from canceled claims and, in addition, specifies that the thickness of the anti-ultraviolet layer is 66.6 to 80% of the mean particle diameter of the microparticles. Support for this range is found in Examples 1-3, where the thickness of the anti-ultraviolet layer is 4 μm and the mean particle diameter is 6 μm in Example 1 and 5 μm in Example 2. Thus, in Example 1 the layer thickness is $(4/6) = 66.66\%$ of the mean particle diameter, and in Example 2 it is $(4/5) = 80\%$ of the mean particle diameter.

Claim Rejections – 35 USC §112

The Office Action rejected claim 1 and claims dependent therefrom on the ground that the specification does not support the statement in claim 1 that the UV absorber is 5 to 15 parts by weight based on 100 parts by weight of the ionizing radiation curable resin composition *following curing*. The Office Action states in the paragraph bridging pages 8 and 9 that paragraph 27 of the instant specification does not make it clear if the stated values are for the coating composition or the cured anti-ultraviolet layer.

This amendment clarifies that the stated values pertain to the ultraviolet layer, as disclosed in the instant specification where, for example:

- Paragraph 38 teaches that a “coating solution … was applied, dried, and irradiated with ultraviolet rays … to form an anti-ultraviolet layer,” and thus distinguishes between “coating solution,” which is the material before UV curing, and “anti-

ultraviolet layer," which is the layer formed by curing, i.e., the layer following curing;

- Paragraph 16 explains that the resin "constituting the anti-ultraviolet layer" is used as the "binder component," thus establishing that the binder component is a part of the anti-ultraviolet layer, i. e., the layer formed following curing; and
- Paragraph 26 explains that the absorber is more preferably 5 to 15 parts by weight with respect to 100 parts of "the binder component," thus teaching that the 5 to 15 values are with respect to the binder component in the cured anti-ultraviolet layer.

The rejection of claims 10, 13 and 16 under the second paragraph of Section 112 is moot as the claims at issue have been canceled.

Claim Rejections – 35 USC § 103

The Office Action relied on two combinations of references for claim rejections under 35 U.S.C. § 103(a): (a) Onozawa et al. US 6,103,370 ("Onozawa") in view of Nakamura et al. US 2002/0085284 A1 ("Nakamura") and further in view of Ciba® TINUVIN® 328 product literature, Ciba® CHIMASSORB® 81 product literature and Ciba® TINUVIN® 1130 product literature (collectively "Ciba product literature"), and (b) McMan et al. US 2004/0241469 A1 ("McMan") in view of Onozawa and Nakamura.

The effect of the invention disclosed in the instant application is to protect images and backgrounds "without changing tint even when they are in a white or pale color" (paragraph 11). This contrasts with prior art in which ultraviolet absorbers change tint by making the yellow tint intense (paragraph 4).

The particular composition of the anti-ultraviolet layer specified in claim 1 thus achieves

a result that is not simply due to the presence of just any type or amount of components but is the result of the specific components, in the specific amounts, sizes and layer thickness that the claim recites.

Even if the individual components could be found in different references, there is no apparent motivation to combine them into the layer recited in claim 1 absent the teachings in the instant application at least for the reasons discussed below.

First, why would one undertake to replace ingredients and other parameters of the Onozawa layers to form the layer of claim 1, which has the unique characteristic of preventing tint changes, when Onozawa is not concerned with tint changes but rather is directed to a layer having abrasion resistance, wear resistance, anti-fouling, water repellence, oil repellence, anti-glare and anti-bacterial properties (Onozawa col. 1, lines 2-15). No teaching could be found in Onozawa that the layer should prevent tint changes such as making the yellow tint intense, and should allow for the true colors of an underlying image to be seen without tint changes.

While Onozawa mentions that "if desired" or "if required" a host of additives can be included, one of which is an ultraviolet absorbent (col. 3, lines 45-50 and col. 4, lines 20-34), no teaching could be found that this is different from the prior art UV absorbers to which the instant application refers in paragraph 4, which do not prevent undesirable tint changes.

Similarly, in Nakamura the objective is properties other than prevention of tint changes, such as anti-glare, anti-reflection, contamination resistance, scratch resistance, transmission image sharpness (which is understood to pertain to preserving spatial resolution rather than to preventing tint changes). Again, no teaching could be found in Nakamura of any components or combination of components that prevent tint changes.

The Ciba product literature may include materials with formula weights in the range

specified in claim 1, but there is no teaching in the primary references (Onozawa and Nakamura) of why one should select the claimed range of formula weight. Only this application teaches that a layer that includes an absorber with the appropriate formula weight, in a layer that has all the other elements recited in the claim, achieves the desired prevention of tint changes. There would be no motivation to pick one formula weight over another for the layer recited in claim 1 if the objective was the different properties sought in Onozawa and Nakamura.

The second combination of references to which the Office Action refers is McMan in view of the same Onozawa and Nakamura references. In McMan, the stated objective is an UV resistant coating. Again, why would a person of ordinary skill in the art reading McMan be motivated to substitute other materials, which have the different purpose of preventing tint changes, for materials that meet the McMan objective of achieving a coating that resists ultraviolet light? What would motivate such a person to pick and choose materials, sizes, formula weights and other characteristics that achieve a purpose different from any of the objectives to which these three references are directed?

Applicants appreciate that an obviousness rejection may rely on the teachings of concepts in addition to the teaching of specific combinations and components but submit that none of the applied references teach the concept or the objective of a layer that, due to the unique combination of features recited in claim 1, prevents undesirable tint changes such as yellow tinting of light colors. Applicants submit that absent the teaching of the instant application that such a layer is achievable and how to achieve it, the hypothetical person skilled in the art at the time of the claimed invention would not have been motivated to select from the extensive universe of possible ingredients, the amounts, sizes and layer forming processes in the precise unique combination recited in claim 1 as amended hereby.

If a petition for an extension of time is required to make this response timely, this paper should be considered to be such a petition. The Patent Office is hereby authorized to charge any required fees, and to credit any overpayment, to our Deposit Account No. 03-3125.

If a telephone interview could advance the prosecution of this application, the Examiner is respectfully requested to call the undersigned attorney.

Respectfully submitted,



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